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NOTES ON GEOGRAPHIC DISTRIBUTION

Distribution extension of Proboscis bat *Rhynchonycteris naso* (Wied-Neuwied, 1820) (Chiroptera: Emballonuridae): New record for southwestern Ecuador

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ABSTRACT: We report the first confirmed record of *Rhynchonycteris naso* in southwestern Ecuador. We observed a colony of about 10 individuals roosting under a bridge of a water reservoir that was surrounded by sugar cane crops and located in Naranjito in the Province of Guayas. This is a heavily disturbed area with small remnants of humid evergreen forest in the lowlands of the Ecuadorian coast. This record constitutes a new locality of *Rhychonycteris naso* for the Guayas province in a different type of vegetation and habitat from previous records for this species in Ecuador and it represents the southwesternmost record for Ecuador and South America.

Rhynchonycteris naso (Wied-Neuwied, 1820) is a common and widespread species occurring in mangroves and lowland forest near streams, rivers, and lakes (Emmons and Feer 1997) and can be found from southeastern México, through Central America, and into northern parts of South America, southeastern Brazil, eastern Peru and northern Bolivia (Goodwin 1942, 1946; Plumpton and Jones 1992; Jones and Hood 1993; Medellín *et al.* 1997; LaVal and Rodríguez-H 2002; Simmons 2005; Hood and Gardner 2008; Lim and Miller 2008). In Ecuador, this species has been reported in the northwestern and central coastal regions and in the eastern Amazon, but it has not yet been recorded in the Andean region (Albuja 1999; Albuja and Mena 2004; Tirira 2008). According to data obtained from the Global Biodiversity Information Facility-Spain (2010), there were three specimens of *R. naso* captured in El Empalme, Congo River, Guayas Province (Mammal Collection of the Estación Biologica de Doñana, Spain: EBD_MAM 12609–12611). They were collected on November 21 1981, but no coordinates were provided. Also, these records do not appear in the current literature concerning the distribution of this species in Ecuador (Albuja 1999; Tirira 1999, 2007, 2008).

On June 24, 2011, a survey of fauna was conducted inside the grounds of "San Carlos," an agricultural and industrial company, in Naranjito, Guayas Province (02°11'03.2" S, 79°22'52.6" W; Figure 1). This area was originally described as lowland evergreen forest with an average temperature ranging between 23°C and 25°C and an average annual rainfall between 1000 and 1500 mm. The rainy season is from December to May and the dry season is from June to November. During the dry season, the only significant rainfall is a drizzle (Sierra M. 1999). Now sugar cane crops predominate this area, however, small remnants of the native forest remain with species such as *Muntingia calabura*, *Cecropia obtusifolia*, *Ochroma pyramidale*, *Centrolobium ochroxylum*, *Calathea lutea*, as well as introduced species, *Tectona grandis* and *Panicum maximum*. There is a water reservoir near the sugar cane crops with an area of approximately 18.12 ha.

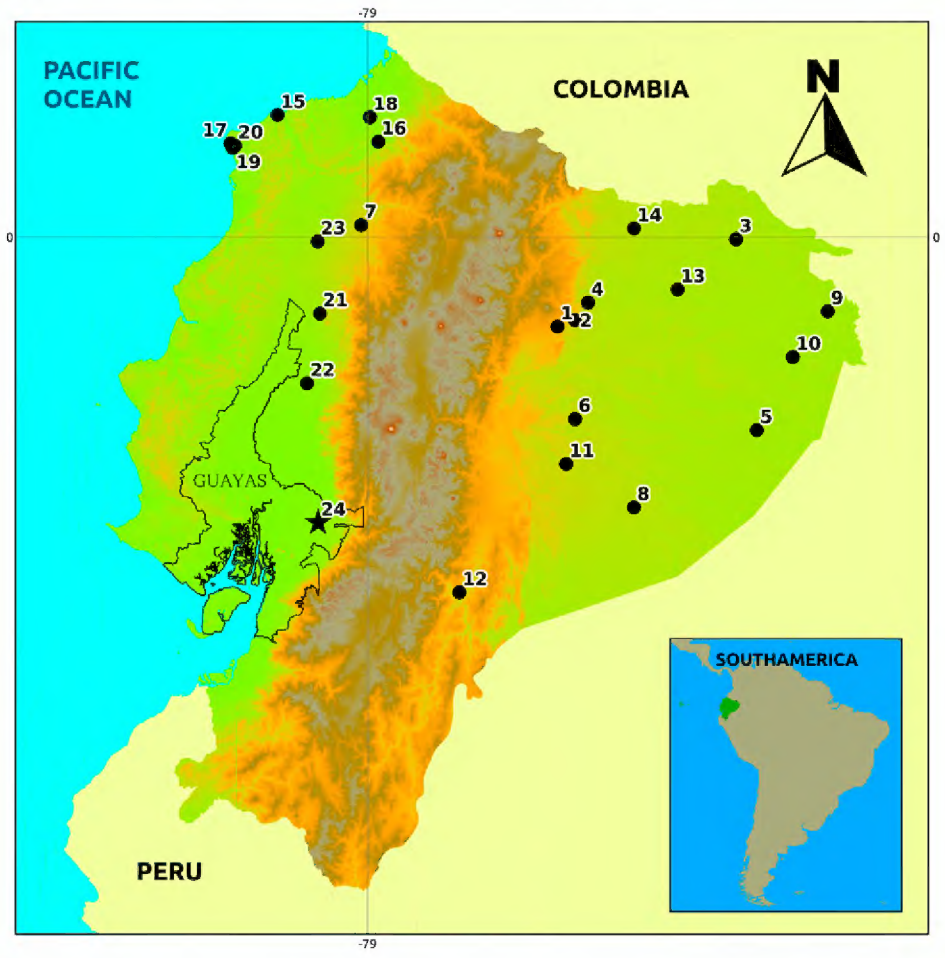

FIGURE 1. Distribution of Rhynchonycteris naso in Ecuador (circles = existing records; star = new record): (1) Cerro Huataracu, Napo (Albuja 1999); (2) Avila, Napo (Albuja 1999); (3) Laguna Grande, Sucumbíos (Albuja 1999); (4) San Jose de Payamino, Napo (Albuja 1999); (5) Comunidad Chayayacu, Pastaza (Albuja 1999); (6) Río Acaro, Sucumbíos (Albuja 1999); (7) Lago Agrio, Sucumbíos (Albuja 1999); (8) Río Bobonaza, Sucumbíos (Albuja 1999); (9) Laguna Zancudo-cocha, Orellana (Albuja 1999); (10) Río Pindo Yacu, Sucumbíos (Albuja 1999); (11) Rio Sarayacu, Napo (Albuja 1999); (12) Méndez, Morona Santiago (Albuja 1999); (13) Limoncocha, Sucumbíos (Albuja 1999); (14) Santa Cecilia, Sucumbíos (Albuja 1999); (15) Río Tiaone, Esmeraldas (Albuja and Mena-V 2004); (16) San Miguel, Esmeraldas (Albuja and Mena-V 2004); (17) Estero Chipa, Esmeraldas (Tirira 2008); (18) Corriente Grande, Esmeraldas (Tirira 2008); (19) Estero Inés, Esmeraldas (Tirira 2008); (20) La Fortuna, Esmeraldas (Tirira 2008); (21) Rio Palenque, Los Ríos (Tirira 2008); (22) María se mira, Los Ríos (Tirira 2008); (23) La Perla, Santo Domingo (Tirira 2008); (24) Naranijto, Guayas (present study).

During this survey, we recognized and identified a colony of *Rhynchonycteris naso* under a small bridge in the water reservoir at 10:00 h. When the bats noticed our presence, they instantly flew to a tree at the margins of the water reservoir in a linear formation. They moved in a rapid, weaving pattern to another roost on the bark of the *Albizia saman* (Fabaceae) (Figure 2–3) where the bats were perched for nearly an hour. We observed around 10 individuals (Figure 2). The bats were identified following the species descriptions provided by Medellín *et al*. (1997) and Tirira (2007). Another bat species captured in the area was the silky short tailed bat, *Carollia brevicauda*. We saw a group of at least 30 individuals of this species below a rainwater duct.

Figure 2. Prosboscis bat colony observed on *Albizia saman* tree in riparian vegetation surrounding the water reservoir

Previous records of this species in Ecuador have been in protected natural areas, or in moderately pristine areas near rivers, lakes, wetlands, and streams (Albuja 1999; Albuja and Mena-V 2004; Tirira 2008). This is in contrast to our record, which is located on an artificial body of water in a heavily disturbed area. The proboscis bat has not been reported formally in the southwestern areas of Ecuador (Albuja 1999; Parker and Car 1992; Rodríguez *et al*. 1995; Tirira 2007; Salas 2008, 2010; Carrera *et al*. 2010), nor in the neighboring dry tropical forest ecosystems of Peru (Pacheco *et al.* 2007, 2009).

The increase in recent years of new bat records in the northwestern and Amazonian regions of Ecuador is noteworthy and have provided important data concerning their distribution and ecology (Pinto *et al*. 2007; Boada *et al*. 2010; McDonough *et al*. 2010; Tirira *et al*. 2010, 2011; Brito and Arguero 2012). It is likely that records of other species would increase in southwestern Ecuador if there was more sampling performed with different techniques (e.g. canopy netting, acoustic survey, roost searching, etc.). This paper reports a new record of *Rhynchonycteris naso* for the Guayas province, in a different vegetation and habitat than previously recorded for this species in the country and represents the southwesternmost record of this species for Ecuador and South America.

Figure 3. Close up view of *Rhynchonycteris naso* individual, observed in Naranjito.

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